

IN THE CLAIMS:

Please amend Claim 22, as follows:

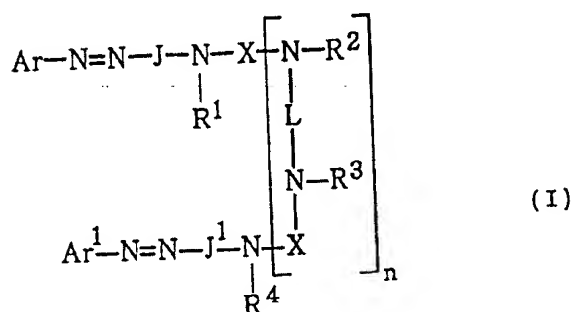
1. (Original) A fluorescent ink containing at least a coloring material and an aqueous liquid medium for dissolving the coloring material, wherein the coloring material comprises C.I. Acid Red 52 and at least one direct dye, the content of the C.I. Acid Red 52 ranging from 0.1 to 0.4% by weight based on the total amount of the ink, the content of the direct dye ranging from 0.11 to 0.4% by weight based on the total amount of the ink, and the weight ratio of the direct dye to the C.I. Acid Red 52 being not higher than 1.6.

2. (Original) The fluorescent ink according to claim 1, wherein the direct dye has two or more azo groups in the dye molecule.

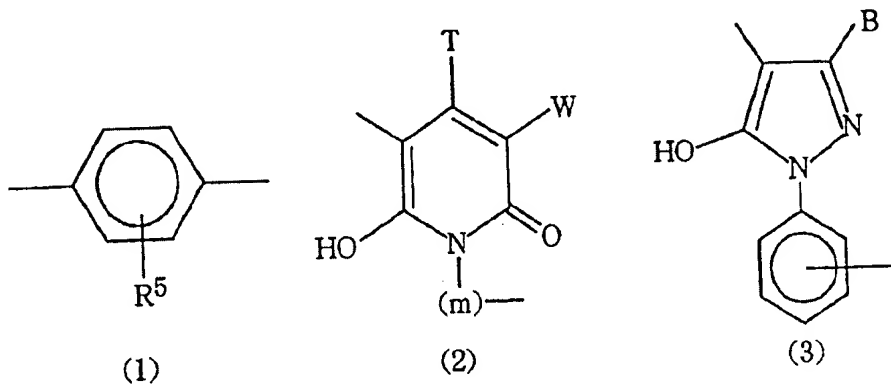
3. (Original) The fluorescent ink according to claim 2, wherein the direct dye has a dimer structure.

4. (Original) The fluorescent ink according to claim 1, wherein the direct dye has a color tone, in $L^*a^*b^*$ color space, of a^* ranging from -20 to 60, b^* ranging from -5 to 60, and of $\sqrt{a^2+b^2}$ of 30 or more.

5. (Original) The fluorescent ink according to claim 2, wherein the direct dye, in a free acid state, is represented by General Formula (I) below:

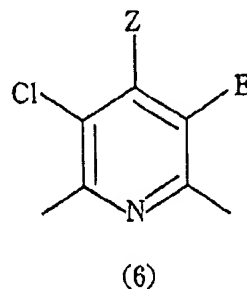
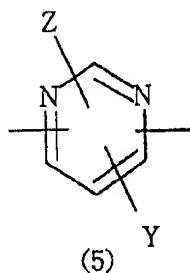
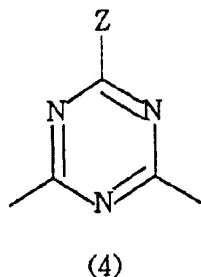


where Ar and Ar¹ are respectively a substituted or unsubstituted aryl group, and at least one of Ar and Ar¹ has a substituent selected from COOH and COSH; J and J¹ are respectively a group selected from the following General Formulas (1), (2), and (3):



(In General Formula (1), R⁵ is independently selected from H, alkyls, substituted alkyls, alkoxy, halogens, CN, ureido, and NHCOR⁶; R⁶ being selected from H, alkyls, substituted alkyls, aryls, substituted aryls, aralkyls, and substituted aralkyls, in General Formula (2), T

is an alkyl; W is selected from H, CN, $\text{CONR}^{10}\text{R}^{11}$, pyridium, and COOH ; (m) is an alkylene chain of 2-8 carbon atoms; R^{10} and R^{11} are each selected from H, alkyls, and substituted alkyls, in General Formula (3), B is selected from H, and alkyls, and COOH .); and in General Formula (I), R^1 , R^2 , R^3 , and R^4 are respectively selected from H, alkyls, and substituted alkyls; L is a divalent organic bonding group; n is an integer of 0 or 1; X is a carbonyl, or one of General Formulas (4), (5), and (6):



(In General Formulas (4)-(6), Z is selected from OR^7 , SR^7 , and NR^8R^9 ; Y is selected from H, Cl, CN, and Z; E is selected from Cl and CN; R^7 , R^8 , and R^9 are respectively selected from H, alkenyls, substituted alkenyls, alkyls, substituted alkyls, aryls, substituted aryls, aralkyls, and substituted aralkyls; and R^8 and R^9 may form a five-membered or six-membered ring together with the nitrogen atom bonding therewith.); and the dye of General Formula (I) which does not have an SO_3H group has at least two groups selected from a COOH group and a COSH group, and the dye of General Formula (I) which has one or more SO_3H groups has groups selected from a COOH group and a COSH group at least in the same number as the number of SO_3H .

6. (Original) The fluorescent ink according to claim 1, wherein the aqueous liquid medium contains water.

7. (Original) The fluorescent ink according to claim 6, wherein the water is contained at a content ranging from 10 to 95% by weight based on the total weight of the ink.

8. (Original) The fluorescent ink according to claim 1, wherein the aqueous liquid medium contains a water-soluble organic solvent.

9. (Original) The fluorescent ink according to claim 8, wherein the water-soluble organic solvent is contained at a content of not more than 50% by weight based on the total weight of the ink.

10. (Original) The fluorescent ink according to claim 1, wherein the ink contains additionally a first organic compound and a second organic compound incompatible with each other, the first organic compound and the second organic compound being soluble or dispersible in the aqueous liquid medium.

11. (Original) The fluorescent ink according to claim 10, wherein the first organic compound and the second organic compound are capable of dissolving or dispersing C.I. Acid Red 52 and the direct dye.

12. (Original) The fluorescent ink according to claim 10, wherein one of the first organic compound and the second organic compound has a solubility parameter of not less than 15, and the other thereof has a solubility parameter of not more than 13.

13. (Original) The fluorescent ink according to claim 10, wherein the first organic compound and the second organic compound are respectively a nonpolar compound.

14. (Original) The fluorescent ink according to claim 10, wherein the first organic compound and the second organic compound are both water-soluble.

15. (Original) The fluorescent ink according to claim 10, wherein the first organic compound and the second organic compound are both liquid.

16. (Original) The fluorescent ink according to claim 10, wherein one of the first organic compound and the second organic compound has a glycerin group.

17. (Original) The fluorescent ink according to claim 16, wherein the organic compound having the glycerin group has three or more hydroxyl groups.

18. (Original) The fluorescent ink according to claim 10, wherein the first organic compound and the second organic compound are both liquid at an ordinary temperature.

19. (Original) The fluorescent ink according to claim 10, wherein one of the first organic compound and the second organic compound is a nonionic surfactant.

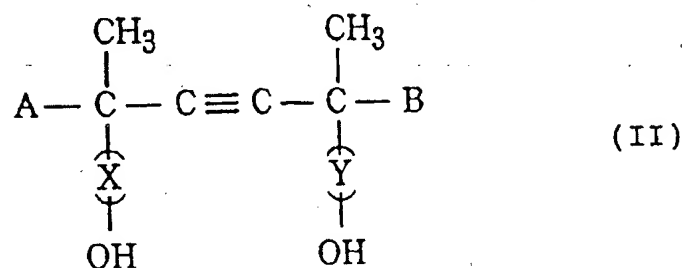
20. (Original) The fluorescent ink according to claim 19, wherein the nonionic surfactant is liquid at an ordinary temperature.

21. (Original) The fluorescent ink according to claim 19, wherein the nonionic surfactant has an HLB value of not more than 13.

22. (Currently Amended) The fluorescent ink according to claim 21, wherein the nonionic surfactant is contained in the ink in an amount not to cause separation at an interface portion of the ink ~~where the~~ liquid medium which is obtained by removing a ~~contains no~~ coloring material from the ink.

23. (Original) The fluorescent ink according to claim 19, wherein the nonionic surfactant has an acetylene group.

24. (Original) The fluorescent ink according to claim 23, wherein the nonionic surfactant has a structure represented by the following General Formula (II):



wherein A and B are independently $\text{C}_n\text{H}_{2n+1}$ (n is an integer of 1 to 10), and X and Y are an open-ring ethylene oxide unit and/or an open-ring propylene oxide unit.

25. (Original) The fluorescent ink according to claim 19, wherein the nonionic surfactant is contained at a content of not lower than 1% by weight based on the total weight of the ink.

26. (Original) The fluorescent ink according to claim 10, further containing a monohydric alcohols.

27. (Original) The fluorescent ink according to claim 10, wherein the counter ion of the hydrophilic group of the direct dye is ammonia.

28. (Original) The fluorescent ink according to claim 10, further containing at least one compound selected from the group consisting of urea and urea derivatives.

29. (Original) The fluorescent ink according to claim 28, wherein the urea derivative is not an acyclic compound.

30. (Original) The fluorescent ink according to claim 28, wherein the urea derivative is at least one selected from the group consisting of alkyl derivatives of urea, and ethylene-oxide and/or propylene-oxide adducts of urea.

31. (Original) The fluorescent ink according to claim 10, wherein the coloring materials of the ink has two counter ions, one of which is an ammonium ion and the other is an alkali metal ion.

32. (Original) The fluorescent ink for ink-jet recording according to claim 10, wherein the ink has a maximum wavelength for excitation and a fluorescence maximum wavelength and the maximum wavelength for excitation is shorter than the fluorescence maximum wavelength.

33. (Original) The fluorescent ink according to claim 1, wherein the ink has a surface tension of not more than 40 mN/m (dyn/cm).

34. (Original) The fluorescent ink according to claim 1, wherein the ink has pH of not lower than 8.

35. (Previously Amended) The fluorescent ink according to claim 1, being applied to a recording medium from an ink supply means, wherein there is a gap between the ink supply means and the recording medium.

36. (Previously amended) The fluorescent ink according to claim 1, being used for ink-jet recording.

37. to 68. (Canceled)

REQUEST TO WITHDRAW PREMATURE FINALITY

The Office Action dated April 20, 2004 entered a rejection that was marked "final", but it is respectfully submitted that finality was entered prematurely and should be withdrawn.

Specifically, the instant Office Action entered new rejections that were not necessitated by actions of the Applicants. For example, in the immediately preceding Office Action dated May 6, 2003 (Paper No. 7), Claims 1 and 6 to 8 were rejected under 35 U.S.C. § 102(e) over U.S. Patent 6,176,908 (Bauer). In their response dated November 6, 2003, Applicants did not amend Claims 1 or 6 to 8, but instead argued that the Bauer reference was deficient and that the § 102(e) rejection over Bauer should be withdrawn.

The instant Office Action dated April 20, 2004 apparently agreed with Applicants' arguments since it changed the statutory basis for its rejection over Bauer. Specifically, in the instant Office Action, Claims 1 and 6 to 8 were rejected under § 103(a) over Bauer, not § 102(e). This is a new rejection that was not necessitated by any action of the Applicants, but rather a recognition of the incorrectness of the original rejection under § 102(e).

It is therefore respectfully submitted that finality of the instant rejection was entered prematurely, and should be withdrawn. As a consequence, all amendments herein should be entered and considered on their merits.

received rejections on two different grounds based on reasons that are inconsistent with each other. The rejection of the remaining claims is respectfully traversed.

The invention concerns a fluorescent ink containing at least a coloring material and an aqueous liquid medium for dissolving the coloring material, wherein the coloring material comprises C.I. Acid Red 52 and at least one direct dye. The content of the C.I. Acid Red 52 ranges from 0.1 to 0.4% by weight based on the total amount of the ink, the content of the direct dye ranges from 0.11 to 0.4% by weight based on the total amount of the ink, and the weight ratio of the direct dye to the C.I. Acid Red 52 is not higher than 1.6.

By virtue of the foregoing arrangement, and particularly because of the numerical ranges recited in Claim 1, a fluorescent ink of the present invention obtains a meritorious effect not found in the prior art. The meritorious effect is exemplified by the examples sprinkled throughout the application herein, which demonstrate superiority to fluorescent inks not covered by the claims (as shown in the Comparative Examples). It is Applicants' position that the primary reference to Bauer is nothing more than one of the comparative examples, such that Bauer does not render the claimed invention obvious, nor does it achieve the meritorious effects of the invention.

To be specific, Bauer discloses that fluorescent dye is present in the amount of 0.05 to 2% by weight. This content of fluorescent dye compares favorably to that disclosed in Comparative Examples I-4 and I-13 of the present application, which is 0.08% by mass. However, as clearly shown by these comparative examples, when the content of